START

0014903

Mr. Mike Gordon
State of Washington
Department of Ecology (PV-11)
Olympia, WA 98504-8711

FLUOR DANIEL, INC.

Date: JULY 8, 1991

Reference: Hanford Waste Vitrification Plant
DOE Contract DE-AC06-86RL10838
Fluor Contract 8457

Transmittal No.: WDOE-051

Dear Mr. Gordon:

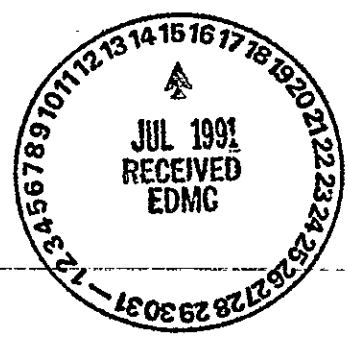
TRANSMITTAL

We Enclose 2 copies of the items listed below. These are issued per US-DOE request.

Response due to Fluor: N/A
Responds to: PKG A140.02 Milestone K738

9212640002

	Rev.	Date	
H-2-117050	0	07/03/91	CIVIL SECURITY FENCE TITLE SHEET
H-2-117051	0	07/03/91	CIVIL SECURITY FENCE DRAWING INDEX
H-2-117052	0	07/03/91	CIVIL SECURITY FENCE INFORMATION SHEET
H-2-117053	0	07/03/91	CIVIL SECURITY FENCE PLAN, NORTH AREA
H-2-117054	0	07/03/91	CIVIL SECURITY FENCE PLAN, SOUTH AREA
H-2-117055	0	07/03/91	CIVIL SECURITY FENCE SECTIONS AND DETAILS
H-2-117056	0	07/03/91	CIVIL SECURITY FENCE GROUNDING DETAILS
B-595-C-140	0	07/03/91	SECURITY FENCE



Distribution:
Reference: FRP-247, FUP-039
R. L. Long: DOE-RL w/0
VPO/AME Corresp Cntrl Cntr, MSIN A5-10
(PKG A140 SECURITY FENCE), w/0
P. Felise, WHC-RL (MSIN G6-16) w/1
Environmental Data Management Center
(MSIN ~~H4-31~~) w/1
D. Duncan, US EPA, Region X w/0

RNG:ERJ:dc

H4-22

Very truly yours,

R. N. Gibbons
Project Director

SECURITY FENCE
B-595-C-A140

SPECIFICATIONS

9212540003

HANFORD WASTE VITRIFICATION PLANT

U.S. DEPARTMENT OF ENERGY
RICHLAND OPERATIONS OFFICE

FLUOR DANIEL
ADVANCED TECHNOLOGY DIVISION
CONTRACT 8457

DOE CONTRACT NO.
DE-AC06-86RL10838

U.S. DEPARTMENT OF ENERGY
Hanford Waste Vitrification Plant
Richland, Washington
DOE Contract DE-AC06-86RL10838

FLUOR DANIEL, INC.
Advanced Technology Division
Fluor Contract 8457

SECURITY FENCE
SPECIFICATION B-595-C-A140

"RELEASED FOR CONSTRUCTION"

REVISION NO. 0
SAFETY CLASS 4
ISSUE DATE _____

APPROVED BY:

E. R. Jacobs	Project Package Engineer	7-3-91 Date
J. L. Smets	Baseline Engineering Manager	7-3-91 Date
E. R. Phillips	Systems Engineering Manager	7-3-91 Date
F. M. Badwan	Independent Safety Manager	7-3-91 Date
O. P. Chawla	Q. A. Manager	7-3-91 Date
R. N. Gibbons	Project Director	7-3-91 Date

9212640004

SECURITY FENCE
(B-595-C-A140)

TABLE OF CONTENTS

TECHNICAL SPECIFICATIONS

SECTION 02830
STEEL CHAIN-LINK SECURITY FENCE

PART 1 GENERAL

1.1 SUMMARY

This section covers the technical requirements for the furnishing and complete installation of steel chain link security fencing and appurtenances as shown on the contract drawings.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A90	1987 Standard Test Method for Weight of Coating on Zinc-Coated (Galvanized) Iron or Steel Articles
ASTM A121	1986 Standard Specification for Zinc-Coated (Galvanized) Steel Barbed Wire
ASTM A153	1982 Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM A392	1989 Standard Specification Zinc-Coated Steel Chain-Link Fence Fabric
ASTM C33	1990 Standard Specification for Concrete Aggregates
ASTM C150	1989 Standard Specification for Portland Cement
ASTM F1083	1987 Standard Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures

1.3 SUBMITTALS

Submit the following in accordance with Part III, Section I, Exhibit 5 of the Purchase Order/Subcontract, Vendor Drawing and Data Requirements (VDDR).

1.3.1 Shop Drawings

Show all fencing components, details of fencing and accessories. These drawings or catalog cuts shall be accompanied by a layout drawing showing spacing of posts and location of gate, corner, end, and pull posts and bracing system.

1.3.2 Manufacturer's Installation Instructions

Submit manufacturer's installation instructions for fencing and gates.

PART 2 PRODUCTS

2.1 **MATERIALS AND/OR EQUIPMENT**

Materials shall conform to the following:

2.1.1 Coating

All fence parts including fasteners shall have a firmly adhering zinc coating of uniform thickness. The minimum average weight of coating per square foot of coated surface shall be not less than 1.2 ounces (2 mils) on all fence material except pipe for posts, braces and gates which shall receive 1.8 ounces (3 mils) and barbed wire shall receive 0.8 ounces (1.4 mils). The minimum average weight of coating on fasteners shall be in accordance with Table 1 of ASTM A153. The weight of zinc coating shall be determined in accordance with ASTM A90. The coating shall be applied to all parts after fabrication.

2.1.2 Fabric

2.1.2.1 Fence fabric shall be 2 inch woven diamond mesh, chain-link, of standard commercial grade galvanized steel wire. Wire shall be 9 gauge having a minimum tensile strength of 75000 psi and conforming to ASTM A392, Class 1.

2.1.2.2 The top and bottom selvages of the fabric shall have a twisted and barbed finish. The wire shall be barbed by cutting the wire at an angle, producing sharp points. The total height of the fabric shall be 7 feet, plus or minus 1 inch.

2.1.3 Posts

2.1.3.1 Line Posts

Line posts shall be galvanized steel 2 inch diameter Schedule 40 pipe conforming to ASTM F1083.

2.1.3.2 Terminal and Gate Posts

2.1.3.2.1 End posts, corner posts, and pull posts shall be galvanized steel 2.5 inch diameter Schedule 40 pipe conforming to ASTM F1083.

2.1.3.2.2 Gate posts shall be galvanized steel Schedule 40 pipe conforming to ASTM F1083 and sized according to the following chart:

Gate Opening		Post
Single Swing	Double Swing	Nominal Diameter
Up to 6 ft.	Up to 12 ft.	2.5 inch
Over 6 ft. to 13 ft.	Over 12 ft. to 26 ft.	3.5 inch
Over 13 ft. to 18 ft.	Over 26 ft. to 36 ft.	6.0 inch
Over 18 ft.	Over 36 ft.	8.0 inch

Gate posts shall extend 12 inches above the top of the fabric for attachment of barbed wire, and shall be fitted with a ball top or similar fitting to shed water.

2.1.4 Extension Arms

Arms on line posts for attachment of barbed wire above the fence fabric shall be made of pressed steel or other approved material with the base shaped to fit the top of the line posts. Arms for end, corner, and pull posts shall be made of malleable iron. Each arm shall carry three lines of barbed wire and shall be so designed that the top line of barbed wire is twelve inches above the fabric. Arms shall extend at an angle of 45 degrees inward and upward toward the enclosed plant site. Arm shall be of sufficient strength to carry 250 pounds applied at location of the outer strand of barbed wire. Extension arms shall be galvanized in accordance with ASTM A153.

2.1.5 Tension Wires

The top and bottom tension wires shall be 7 gauge steel wire, galvanized, standard commercial grade steel having a minimum tensile strength of 75000 psi.

2.1.6 Post Braces

2.1.6.1 Horizontal steel pipe braces for gate, corner, and pull posts shall be galvanized steel pipe 1.5 inch diameter Schedule 40 conforming to ASTM F1083.

2.1.6.2 Diagonal truss bracing for gate, corner, and pull posts shall be galvanized steel rods 3/8 inch diameter with turnbuckles.

2.1.7 Barbed Wire

Each line of protective barbed wire shall consist of two 12-1/2 gauge, galvanized, twisted, standard commercial grade steel wires, with 14 gauge four point barbs spaced not less than 3 inches nor more than 5 inches apart. Barbed wire shall conform to ASTM A121, Class 3.

2.1.8 Fabric Ties

Fence fabric shall be fastened to line posts with minimum 9 gauge wire ties and to tension wires with minimum 11 gauge wire ties. Wire ties may be either aluminum or galvanized steel wire which shall not fracture when bent 180 degrees on a mandrel having the same diameter as the wire.

2.1.9 Miscellaneous Fittings

All other fittings used in the construction of the fence shall be malleable iron, cast iron, or pressed steel and shall be galvanized in accordance with ASTM A153.

2.1.10 Gates

Gate frames shall be fabricated from 1.5 inch diameter Schedule 40 galvanized steel pipe conforming to ASTM F1083. The end members of the frame shall extend 12 inches above the top horizontal member of the frame and shall be fitted to carry 3 lines of barbed wire. All open ends of pipe members in gate frames shall be fitted with a pipe plug. Gate frame corner fittings, if used, shall be of malleable iron. If gate frames are of welded construction they shall be galvanized after fabrication. All gate frames shall be rigidly braced to prevent sagging, buckling, and weaving.

2.1.10.1 Fabric for gates shall be the same as specified for the fence in Paragraph 2.1.2.

2.1.10.2 Hinges shall be of heavy pattern, zinc-coated steel of adequate strength for the gate, and with large bearing surfaces for clamping in position. The hinges shall allow the gate to swing a minimum of 180 degrees, and shall not twist or turn under action of the gate. The gate shall be capable of being opened and closed easily by one person.

2.1.10.3 Latches, stops and keepers shall be zinc-coated steel and be provided for all gates. Latches shall have a plunger bar arranged to engage the center stop, except that for single gates less than 8 feet wide a forked latch may be provided. Latches shall be arranged for padlocking (accessible from both sides of gate). Center stops shall consist of a device, set in concrete, to engage the plunger bar. Keepers shall be provided and set in concrete to secure the free end of the gate when in the full open position. Details of a typical gate and gate hardware are shown on Attachment B of this specification.

2.1.10.4 All miscellaneous fittings used in the construction of gates shall be of malleable iron, cast iron, or pressed steel, and shall be galvanized after fabrication in accordance with ASTM A153.

2.1.11 Turnstiles

Provide galvanized steel, three wing turnstile consisting of a rotor, cage, ceiling plate, and bottom bearing plate in accordance with the contract drawings. Turnstiles shall be continuous turn motion.

2.1.12 Concrete

Concrete for fence foundations shall be ready-mix concrete having a minimum compressive strength of 2500 psi at 28 days.

Concrete shall consist of Portland cement Type I or II per ASTM C150, aggregates conforming to ASTM C33 and potable water. Use minimum 4 sacks of cement per cubic yard of concrete. Maximum aggregate size shall not exceed 1 inch.

2.1.13 Grounding Material

Grounding material shall be as defined on the contract drawings.

2.1.14 Padlocks

Provide a padlock for each gate opening and provide chains that secure the gate to each end post without hindering gate operation. Padlocks shall be 2 inch hardened steel locks with removable cores (Corbin Model 82863AH or Buyer approved equal) and zero bitted keyways.

PART 3 EXECUTION

3.1 GENERAL

The fence shall be installed true to line and grade in the location shown on the contract drawings and in accordance with this specification, including the Chain Link Security Fence Details, Gate, and Typical Fittings shown on Attachments A and B. The fence shall be erected in accordance with the Buyer approved manufacturer's recommendations.

3.2 PREPARATION

The site grade along the fence line will have been prepared by others and the Seller shall install the fence to match the established grade/surface. The surface is overlain with 4 inches of crushed rock.

3.3 INSTALLATION, APPLICATION AND ERECTION

3.3.1 Setting Posts

3.3.1.1 All posts shall be set in concrete, plumb and true to line. Additional construction details are shown on Attachment A of this specification. Gate posts shall be set with the top (exclusive of ball caps) 8 feet above finish surface. All other posts shall be set with the top 7 feet above finish surface. Maximum spacing of line posts shall be 10 feet on center.

3.3.1.2 Holes for setting line posts shall be 12 inches diameter; and holes for pull, gate and corner posts shall be 16 inches diameter except 24 inch diameter hole shall be used for 8 inch diameter gate post. The hole diameter can deviate minus zero and plus 2 inches from the above specified values.

3.3.1.3 The line posts adjacent to the terminal posts (brace posts) shall be set at the spacing required to make the horizontal braces fit properly. A pull post shall be set at each break in the fence line grade exceeding 15 degrees.

3.3.1.4 In setting gate posts, the posts must be set at the spacing shown on the approved shop drawings. For example, posts for a six-foot gate must be set to leave a clear opening of six feet. The tops of gate posts at each gate must be at the same elevation.

3.3.1.5 All posts shall be set plumb and firmly supported to prevent movement or deflection until the concrete has thoroughly set (24 hours minimum) before preforming other work on posts.

3.3.2 Bracing Posts

All gate, corner (angle 30 degrees and larger) and terminal posts shall be braced horizontally with steel pipe using brace attachments, and shall be braced diagonally using steel rods with truss attachments in accordance with the Buyer approved manufacturer's recommendations and as shown on Attachment A. Pull posts shall be provided and braced at intervals not to exceed 500 feet length of straight fence.

3.3.3 Tension Wires

3.3.3.1 Top and bottom tension wires shall be installed to stabilize wire fabric. When extension arms are required, the top tension wire shall be threaded through the holes in the extension arms provided for top rails. When extension arms are not required, the top tension wire shall be installed through 1/4 inch holes drilled in each post (except gate posts) 2±1/2 inches below the top of the post.

3.3.3.2 Bottom tension wires shall be installed through 1/4 inch holes in each post (except gate posts) 3±1/2 inches above finished surface.

3.3.3.3 Top and bottom tension wires shall be connected to the gate posts with a galvanized clip or band supplied by the fence manufacturer.

3.3.4 Attaching and Stretching Fabric

3.3.4.1 Stretcher bars shall be threaded through end loops of each section of fabric and tied to end, break-in-grade, corner, and gate posts with stretcher bar bands spaced not more than 15 inches on center.

3.3.4.2 The fabric shall be fastened to the line posts with ties conforming to Paragraph 2.1.8 and spaced not more than 14 inches on centers. The topmost tie shall be as near the top of the fabric as possible; the lowest tie as near the bottom of the fabric as possible.

3.3.4.3 The fabric shall be tied to the top and bottom tension wires with ties conforming to Paragraph 2.1.8 and spaced not more than 24 inches on centers.

3.3.4.4 The fence fabric shall be stretched taut.

3.3.4.5 The barbed ends of the barbed top fabric shall extend approximately two to three inches above the top tension wire. Each barb shall be straightened as needed in order to present an unbroken line above and below the tension wire.

3.3.4.6 The bottom of the fabric shall extend to within 2 inches of the finish surface.

3.3.5 Attaching Barbed Wire

On line posts the barbed wire shall be placed in the slots provided in the extension arms and either pinned in place or securely tied. Barbed wire to terminal and gate posts shall be connected by galvanized steel clip or band supplied by the fence manufacturer.

3.3.6 Installation of Gates

3.3.6.1 Gates shall be installed in accordance with the contract drawings, this specification and the drawing on Attachment B. Gates shall be installed in good alignment, and shall swing and latch properly. The gate hinges shall be so adjusted that the gates swing inward and outward at an angle of 180 degrees or more. Gate hinges shall be installed to permit a maximum 2 inches from finish surface to bottom of gate.

3.3.6.2 Gate fabric shall be installed on gate frames with tension bands spaced at a maximum 15 inches center vertically and horizontally.

3.3.7 Bolt Heads

All bolt heads shall be located on the inside of the fence enclosing the plant site.

3.3.8 Grounding

Fences shall be grounded, at power line crossings and at gates as shown on the contract drawings.

3.3.9 Repair of Damaged Zinc Coatings

3.3.9.1 Damages caused by welding, cutting, drilling, and rough handling during shipping and erection shall be repaired using one or a combination of the following methods:

A. Zinc Based Solders - Zinc alloy solder composed of zinc-cadmium or zinc-tin-lead alloy having a melting point in the range of 450°F through 530°F. The solders can be in a rod, stick or powder form.

B. Organic Zinc Rich Coating - Polyamide cured epoxy for use on steel surfaces. The dry film shall contain a minimum of 94 percent zinc dust by weight.

3.3.9.2 Repairs shall be made on clean and dry surfaces, removing oil, grease, burnt residue weld spatter, and other contaminants. Follow the manufacturer's instructions for application.

3.3.9.3 Regardless of the method used, one application of the zinc coating shall provide a dry film thickness of 2.0 to 3.0 mils.

3.4 **PROTECTION**

3.4.1 Measures shall be taken to protect all existing facilities such as benchmarks, fences, railroads, existing utilities, aboveground electrical, and other items which are to remain and not designated for removal. Items to be protected which are not readily visible in the working area shall be clearly identified with barricades, posts and/or conspicuously colored flagging.

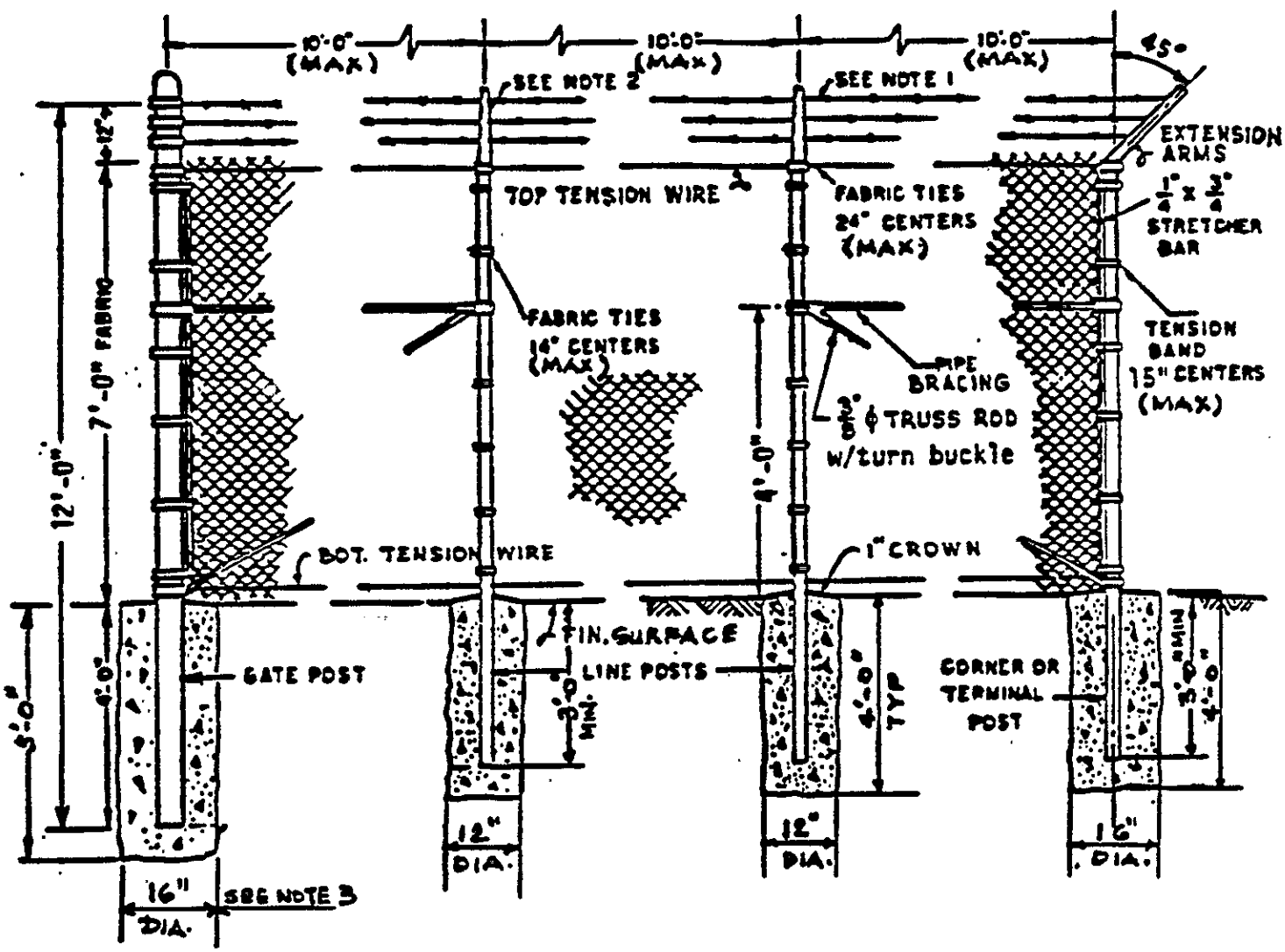
3.4.2 Measures shall be taken to protect the existing export water lines and associated appurtenances from being damaged due to construction activities and overburdening loads created by construction equipment.

3.4.3 Existing plant roads shall be protected from damage from the Seller's equipment. Upon completion of the work they shall be cleared of all dirt and debris and be left power broom clean.

END OF SECTION

ATTACHMENT A

CHAIN LINK SECURITY FENCE DETAILS

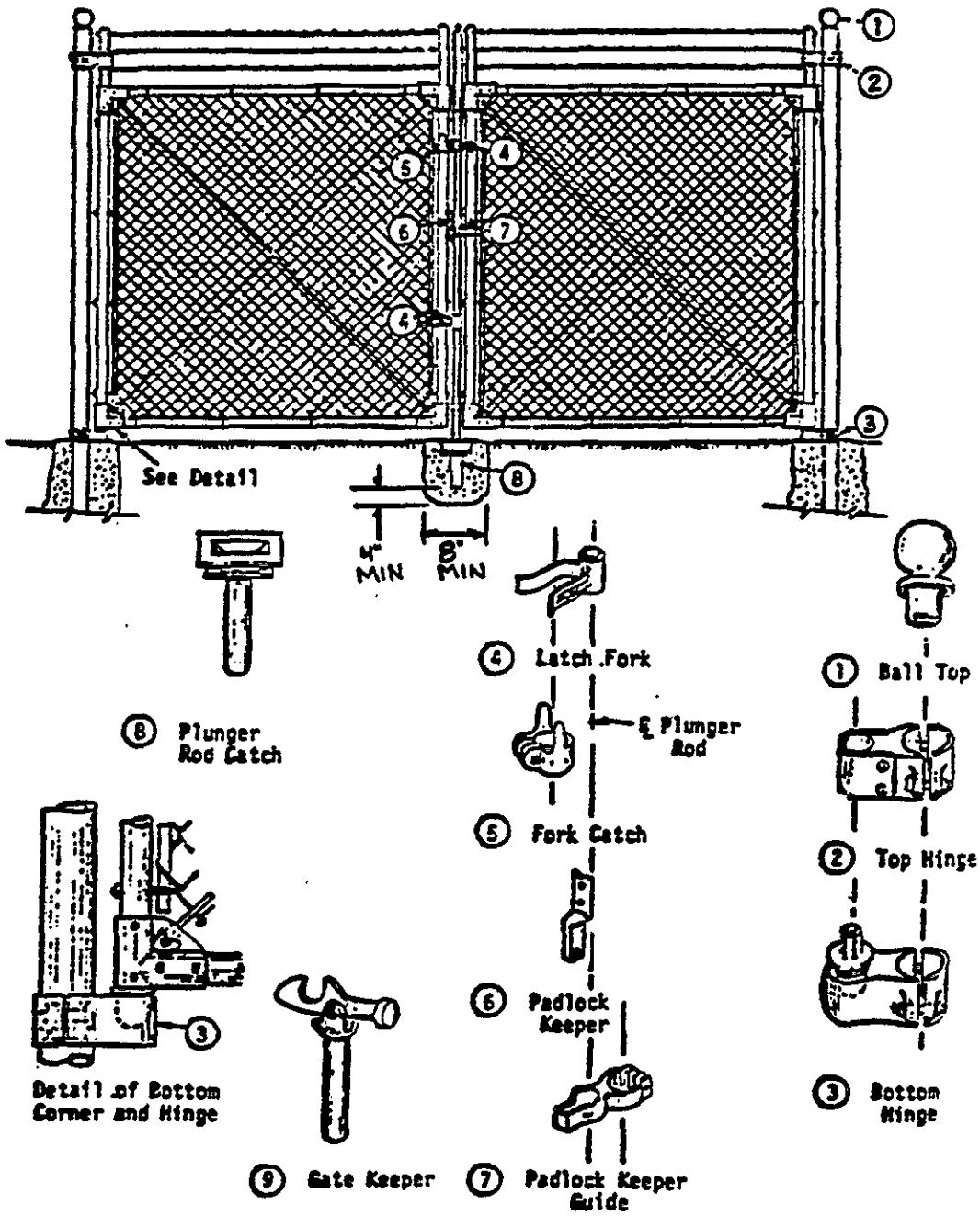


NOTES:

1. Three lines of four-point barbed wire shall be installed.
2. Barbed wire extension arms shall be slanted inward 45° from vertical and towards the enclosed plant site.
3. Use 24 inch diameter for 8 inch gate post.

ATTACHMENT B

CHAIN LINK FENCE GATE AND TYPICAL FITTINGS



92125409017

SAFETY CLASS 4

REV NO.	DATE	REVISION DESCRIPTION	APPROVAL INITIALS			
0	7/3/91	RELEASED FOR CONSTRUCTION	D.R.P. / ZJK	PMX / MJA	RLK / TSK	EJ / RMJ

CADFILE	B117050A	CADCODE	2B:IBM:ACD2:10.C2:SS

ENGINEERING RELEASE

REV. ________ DATE ________

ERO. ________

SIGNATURE		DATE
WHC RELEASE AUTHORIZATION BY	[signature]	7-3-91
PROJ. DIR.	[signature]	7/3/91
Q.A. ENGR.	[signature]	7/5/91
INDEPENDENT SAFETY	M. J. Figuera	7/3/91
ENGINEERING MGR.	[signature]	7/3/91
SYSTEMS MGR.	E.K. Jacobs	7-3-91
SUPERVISOR	[signature]	7/3/91
DESIGN ENGINEER	[signature]	7/3/91
CHECKED	P. Fegan	7/3/91
DRAWN	B.H.CONLEY	7/3/91

U.S.DEPARTMENT OF ENERGY

Richland Operations Office

DE – AC06-86RL10838

FLUOR DANIEL, INC.
ADVANCED TECHNOLOGY DIVISION

CIVIL
SECURITY FENCE
TITLE SHEET

PROJECT TITLE: **HANFORD WASTE VITRIFICATION PLANT**

PROJECT	FLUOR CONTRACT NO.	CWBS NO.
B-595	8457	A140

SCALE	BLDG. NO.	INDEX NO.
NONE		

CLASSIFICATION	BY	DRAWING NUMBER	SHEET	OF	REV.
NONE	NOT REQ'D	H-2-117050	1	1	0

B

A

2   1 OF 7   1

DISTRIBUTION CODE :   T1   ACAD   06-27-91

9212640018

SAFETY CLASS 4

REV NO.	DATE	REVISION DESCRIPTION	APPROVAL INITIALS			
0	7/3/91	RELEASED FOR CONSTRUCTION	D.R.P.	PMZ	RDU	EJ
			DK	MJH	DK	RMJ

CADFILE	B117051A	CADCODE	2B: IBM: ACD2: 10.C2: SS

ENGINEERING RELEASE

REV. ________ DATE ________

ERO. ________

SIGNATURE	DATE
WHC ~~APPROVAL~~ RELEASE AUTHORIZATION BY Carl Van Katwyk	7-3-91
PROJ. DIR. R.M. Gibbons	7/3/91
Q.A. ENGR. [signature]	7/3/91
INDEPENDENT SAFETY M.J. Higuera	7/3/91
ENGINEERING MGR. J.H. Kimura	7/3/91
SYSTEMS MGR. E.R. Jacobs	7-3-91
SUPERVISOR K.P. Kumar	7/3/91
DESIGN ENGINEER [signature]	7/3/91
CHECKED P. Lujan	7/3/91
DRAWN B.H.CONLEY	7/3/91

U.S.DEPARTMENT OF ENERGY
Richland Operations Office
DE – AC06-86RL10838

FLUOR DANIEL, INC.
ADVANCED TECHNOLOGY DIVISION

CIVIL
SECURITY FENCE
DRAWING INDEX

PROJECT TITLE: HANFORD WASTE VITRIFICATION PLANT

PROJECT	FLUOR CONTRACT NO.	CWBS NO.
B-595	8457	A140

SCALE	BLDG. NO.	INDEX NO.
NONE		

CLASSIFICATION	BY	DRAWING NUMBER	SHEET	OF	REV.
NONE	NOT REQ'D	H-2-117051	1	1	0

9 2 1 2 6 4 0 0 1 9

SAFETY CLASS 4

REV NO.	DATE	REVISION DESCRIPTION	APPROVAL INITIALS			
0	7/3/91	RELEASED FOR CONSTRUCTION	DRP / GK	PMY / MJA	RPK / GBK	EJ / EMY

CADFILE	B117052A	CADCODE	2B:IBM:ACD2:10.C2:SS

ENGINEERING RELEASE

REV. ________ DATE ________

ERO. ________

SIGNATURE		DATE
WHC ~~APPROVAL~~ RELEASE AUTHORIZATION BY	[signature]	7-3-91
PROJ. DIR.	[signature]	7/3/91
Q.A. ENGR.	[signature]	7/3/91
INDEPENDENT SAFETY	M. J. Higuera	7/3/91
ENGINEERING MGR.	[signature]	7/3/91
SYSTEMS MGR.	E.R. Jacobs	7-3-91
SUPERVISOR	[signature]	7/3/91
DESIGN ENGINEER	[signature]	7/3/91
CHECKED	P. Lujan	7/3/91
DRAWN	B.H.CONLEY	7/3/91

U.S.DEPARTMENT OF ENERGY

Richland Operations Office

DE – AC06-86RL10838

FLUOR DANIEL, INC.
ADVANCED TECHNOLOGY DIVISION

CIVIL
SECURITY FENCE
INFORMATION SHEET

PROJECT TITLE: **HANFORD WASTE VITRIFICATION PLANT**

PROJECT	FLUOR CONTRACT NO.	CWBS NO.
B-595	8457	A140
SCALE: NONE	BLDG. NO.	INDEX NO.

CLASSIFICATION	BY	DRAWING NUMBER	SHEET	OF	REV.
NONE	NOT REQ'D	H-2-117052	1	1	0

B

A

2

3 OF 7

DISTRIBUTION CODE : C1 ACAD 06-27-91 NSR

9 2 1 2 5 4 0 0 0 2 0

SAFETY CLASS 4

REV NO.	DATE	REVISION DESCRIPTION	APPROVAL INITIALS			
0	7/3/91	RELEASED FOR CONSTRUCTION	D.R.P.	PMG	RPK	EJ
			GK	MAH	GK	KNJ

CADFILE	B117053A	CADCODE	2B:IBM:ACD2:10.C2:SS

ENGINEERING RELEASE
REV. ______ DATE ______
ERO. ______

SIGNATURE	DATE
WHC RELEASE AUTHORIZATION BY [signature]	7-3-91
PROJ. DIR. [signature]	7/3/91
Q.A. ENGR. [signature]	7/3/91
INDEPENDENT SAFETY [signature]	7/3/91
ENGINEERING MGR. [signature]	7/3/91
SYSTEMS MGR. [signature]	7-3-91
SUPERVISOR [signature]	7/3/91
DESIGN ENGINEER [signature]	7/3/91
CHECKED P. Lujan	7/3/91
DRAWN B.H.CONLEY	7/3/91

U.S.DEPARTMENT OF ENERGY
Richland Operations Office
DE – AC06-86RL10838

FLUOR DANIEL, INC.
ADVANCED TECHNOLOGY DIVISION

CIVIL
SECURITY FENCE PLAN
NORTH AREA

PROJECT TITLE
HANFORD WASTE VITRIFICATION PLANT

PROJECT	FLUOR CONTRACT NO.	CWBS NO.
B-595	8457	A140
SCALE 1" = 100'	BLDG. NO.	INDEX NO.

CLASSIFICATION	BY	DRAWING NUMBER	SHEET	OF	REV.
NONE	NOT REQ'D	H-2-117053	1	1	0

B

A

2 4 OF 7 1

DISTRIBUTION CODE C2 ACAD 07-01-91 BHC

79.80

SAFETY CLASS 4

REV NO.	DATE	REVISION DESCRIPTION	APPROVAL INITIALS			
0	7/3/91	RELEASED FOR CONSTRUCTION	DRP / GK	PMZ / MJH	RPK / RK	EJ / RMH

CADFILE B117054A | CADCODE 2B:IBM:ACD2:10.C2:SS

ENGINEERING RELEASE

REV. ________ DATE ________

ERO. ________

SIGNATURE	DATE
WHC ~~APPROVAL~~ RELEASE AUTHORIZATION BY Ed Van Kleinenberg	7-3-91
PROJ. DIR. R N Hubbard	7/3/91
Q.A. ENGR.	7/5/91
INDEPENDENT SAFETY M. J. Higuera	7/3/91
ENGINEERING MGR. A. N. Kumar	7/3/91
SYSTEMS MGR. E R Jacobs	7-3-91
SUPERVISOR R Kumar	7/3/91
DESIGN ENGINEER D R Patel	7/3/91
CHECKED P. Lujan	7/3/91
DRAWN B.H.CONLEY	7/3/91

U.S.DEPARTMENT OF ENERGY

Richland Operations Office

DE – AC06-86RL10838

FLUOR DANIEL, INC.

ADVANCED TECHNOLOGY DIVISION

CIVIL
SECURITY FENCE PLAN
SOUTH AREA

PROJECT TITLE: HANFORD WASTE VITRIFICATION PLANT

PROJECT	FLUOR CONTRACT NO.	CWBS NO.
B-595	8457	A140

SCALE	BLDG. NO.	INDEX NO.
1" = 100'		

CLASSIFICATION	BY
NONE	NOT REQ'D

DRAWING NUMBER	SHEET	OF	REV.
H-2-117054	1	1	0

2   1

B   A

DISTRIBUTION CODE : C3   ACAD   06-27-91 NSR

9212640022

SAFETY CLASS 4

REV NO.	DATE	REVISION DESCRIPTION	APPROVAL INITIALS
0	7/3/91	RELEASED FOR CONSTRUCTION	RRP PMH RPA EJ

CADFILE B117055A CADCODE 2B:IBM:ACD2:10.C2:SS

ENGINEERING RELEASE
REV. _____ DATE _____
ERO. _____

SIGNATURE	DATE
WHC ~~APPROVAL~~ RELEASE AUTHORIZATION BY	7-3-91
PROJ. DIR.	7/3/91
Q.A. ENGR.	7/5/91
INDEPENDENT SAFETY	7/3/91
ENGINEERING MGR.	7/3/91
SYSTEMS MGR.	7-3-91
SUPERVISOR	7/3/91
DESIGN ENGINEER	7/3/91
CHECKED P. Lujan	7/3/91
DRAWN B.H.CONLEY	7/3/91

U.S. DEPARTMENT OF ENERGY

Richland Operations Office
DE – AC06–86RL10838

FLUOR DANIEL, INC.
ADVANCED TECHNOLOGY DIVISION

CIVIL
SECURITY FENCE
SECTIONS & DETAILS

PROJECT TITLE
HANFORD WASTE VITRIFICATION PLANT

PROJECT	FLUOR CONTRACT NO.	CWBS NO.
B-595	8457	A140
SCALE NONE	BLDG. NO.	INDEX NO.

CLASSIFICATION	BY	DRAWING NUMBER	SHEET	OF	REV.
NONE	NOT REQ'D	H-2-117055	1	1	0

9212640023

SAFETY CLASS 4

REV NO.	DATE	REVISION DESCRIPTION	APPROVAL INITIALS			
0	7/3/91	RELEASED FOR CONSTRUCTION				

CADFILE	B117056A	CADCODE	2B:IBM:ACD2:10.C2:SS

ENGINEERING RELEASE
REV. ________ DATE ________
ERO. ________

SIGNATURE	DATE
WHC ~~APPROVAL~~ RELEASE AUTHORIZATION BY	7-3-91
PROJ. DIR.	7/3/91
Q.A. ENGR.	7/3/91
INDEPENDENT SAFETY	7/3/91
ENGINEERING MGR.	7/3/91
SYSTEMS MGR.	7-3-91
SUPERVISOR	7/3/91
DESIGN ENGINEER	7/3/91
CHECKED	7/3/91
DRAWN B.H.CONLEY	7/3/91

U.S.DEPARTMENT OF ENERGY
Richland Operations Office
DE – AC06-86RL10838

FLUOR DANIEL, INC.
ADVANCED TECHNOLOGY DIVISION

CIVIL
SECURITY FENCE
GROUNDING DETAILS

PROJECT TITLE
HANFORD WASTE VITRIFICATION PLANT

PROJECT	FLUOR CONTRACT NO.	CWBS NO.
B-595	8457	A140
SCALE: AS NOTED	BLDG. NO.	INDEX NO.

CLASSIFICATION	BY	DRAWING NUMBER	SHEET	OF	REV.
NONE	NOT REQ'D	H-2-117056	1	1	0

DISTRIBUTION CODE C5 ACAD 06-27-91 NSR